Supreme Court, U.S.
FILED

No. 01-1791 JUN 5 2001

IN THE
Supreme Court of the United States

FATA ALUMINIUM, INC. AND FATA GROUP, S.P.A.,
Petitioners,
v.
VULCAN ENGINEERING CO., INC.,
Respondent.

On Petition for a Writ of Certiorari to the United States Court of Appeals for the Federal Circuit

PETITION FOR A WRIT OF CERTIORARI

PETER D. EHRENHAFT
Counsel of Record
ALAN I. HOROWITZ
MILLER & CHEVALIER, CHARTERED
655 Fifteenth Street, N.W.
Suite 900
Washington, D.C. 20005
(202) 626-5905

RICHARD H. STERN
DAVID C. FREDERICK
KELLOGG, HUBER, HANSEN, TODD & EVANS, P.L.L.C.
1615 M Street, N.W.
Suite 400
Washington, D.C. 20036
(202) 326-7900

June 5, 2002

118 pp

QUESTION PRESENTED

The Constitution authorizes Congress to grant patents for limited terms to inventors of new and useful discoveries. It also limits the power of the government to grant patents – and the potential monopoly powers they impart. An indispensable requirement to justify a patent is that the alleged invention is not "obvious" under 35 U.S.C. § 103 – which means that a person of ordinary skill in the relevant technology would not have found it unduly difficult to decide to combine the claimed elements of the patented device to arrive at the device, based on the presence of those elements in earlier technology ("prior art"). In *Graham v. John Deere Co.*, 383 U.S. 1 (1966), this Court construed § 103 within the constraints of the Patent Clause's limitations to require a court to evaluate three "primary considerations" to determine whether patented inventions are obvious in the light of the magnitude of the difference between what is patented and the prior art. Since its creation in 1982, the Federal Circuit has increasingly departed from this Court's *Graham* test by imposing additional proof requirements on parties challenging patent validity and by elevating commercial success above the *Graham* primary considerations. In this context, the question presented – one of statutory construction in a constitutional framework – is:

> Whether the Federal Circuit has improperly superseded this Court's legal test of obviousness under 35 U.S.C. § 103 by adding further, nonstatutory criteria that trump this Court's *Graham* primary considerations.

CORPORATE DISCLOSURE STATEMENT

Pursuant to Rule 29.6 of the Rules of this Court, petitioners FATA Aluminium, Inc. and FATA Group, S.p.A. state the following:

FATA Aluminium, Inc. is a wholly owned subsidiary of FATA Engineering and Contracting, S.R.L., an Italian corporation, which in turn is owned and controlled by FATA Group, S.p.A., the shares of which are not publicly traded.

TABLE OF CONTENTS

Page

QUESTION PRESENTED i

CORPORATE DISCLOSURE STATEMENT ii

TABLE OF AUTHORITIES v

OPINIONS BELOW 1

JURISDICTION 1

CONSTITUTIONAL AND STATUTORY PROVISIONS INVOLVED 1

STATEMENT 1

REASONS FOR GRANTING THE PETITION 8

I. UNDER THIS COURT'S LEGAL TEST FOR OBVIOUSNESS, THE VULCAN PATENT WOULD BE INVALID 9

A. This Court's Test for What Is Obvious Has Consistently Focused on the Level of Inventive Merit of the Patented Device Relative to the Prior Art 9

B. Vulcan's Patent Is Invalid Under the *Graham* Primary Considerations 14

II. THE FEDERAL CIRCUIT'S LEGAL TEST FOR OBVIOUSNESS CONFLICTS WITH *GRAHAM* AND ITS PROGENY 16

III. THE FEDERAL CIRCUIT'S LEGAL TEST FOR OBVIOUSNESS CONFLICTS WITH THE TEST PREVIOUSLY APPLIED BY THE REGIONAL CIRCUITS 22

IV. THE FEDERAL CIRCUIT'S LEGAL STANDARD FOR OBVIOUSNESS DAMAGES THE PATENT SYSTEM 24

A. The Federal Circuit's Standard Is Too Lax 25

B. The Federal Circuit Has Far Exceeded Its Assigned Role in Patent Cases 29

CONCLUSION 30

APPENDIX:

Federal Circuit Opinion (Feb. 5, 2002) 1a

District Court Opinion (Aug. 10, 1999) 27a

District Court Final Judgment (Aug. 30, 2000) 73a

Order Granting Extension of Time for Filing Petition for a Writ of Certiorari (Apr. 29, 2002) 74a

Constitutional and Statutory Provisions Involved 75a

TABLE OF AUTHORITIES

Page

CASES

ATD Corp. v. Lydall, Inc., 159 F.3d 534 (Fed. Cir. 1998) 17

Alcor Aviation, Inc. v. Radair, Inc., 527 F.2d 113 (9th Cir. 1975) 23

American Monorail Co. v. Parks-Cramer Co., 245 F.2d 739 (4th Cir. 1957) 22

American Seating Co. v. National Seating Co., 586 F.2d 611 (6th Cir. 1978) 23

Anderson's-Black Rock, Inc. v. Pavement Salvage Co., 396 U.S. 57 (1969) ..... *passim*

Ashland Oil, Inc. v. Delta Resins & Refractories, Inc.:

587 F. Supp. 1406 (E.D. Mich. 1984), *rev'd*, 776 F.2d 281 (Fed. Cir. 1985) 23

776 F.2d 281 (Fed. Cir. 1985) 16, 23

Atlantic Works v. Brady, 107 U.S. 192 (1883) 10

Bonito Boats, Inc. v. Thunder Craft Boats, Inc., 489 U.S. 141 (1989) 9, 10, 12, 28

Bristol Locknut Co. v. SPS Techs., Inc., 677 F.2d 1277 (9th Cir. 1982) 22

Cardinal Chem. Co. v. Morton Int'l, Inc., 508 U.S. 83 (1993) 29

Cathodic Protection Serv. v. American Smelting & Ref. Co., 594 F.2d 499 (5th Cir. 1979) 22

Christianson v. Colt Indus. Operating Corp., 486 U.S. 800 (1988) 24

Chu, In re, 66 F.3d 292 (Fed. Cir. 1995) 17

Continental Can Co. v. Crown Cork & Seal Co., 415 F.2d 601 (3d Cir. 1969) 22

Continental Can Co. v. Old Dominion Box Co., 393 F.2d 321 (2d Cir. 1968) 22

Custom Accessories, Inc. v. Jeffrey-Allan Indus., Inc., 807 F.2d 955 (Fed. Cir. 1986) 18, 23

Dann v. Johnston, 425 U.S. 219 (1976) ..... *passim*

Demaco Corp. v. F. Von Langsdorff Licensing Ltd., 851 F.2d 1387 (Fed. Cir. 1988) 19

Dembiczak, In re, 175 F.3d 994 (Fed. Cir. 1999) 16-17, 27

Dickinson v. Zurko, 527 U.S. 150 (1999) 24, 29

Dual Mfg. & Eng'g, Inc. v. Burris Indus., Inc., 619 F.2d 660 (7th Cir. 1980) 22, 23

Ecolochem, Inc. v. Southern California Edison Co., 227 F.3d 1361 (Fed. Cir. 2000), *cert. denied*, 532 U.S. 974 (2001) 27

Eltra Corp. v. Basic Inc., 599 F.2d 745 (6th Cir. 1979) 23

Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., No. 00-1543, 2002 WL 1050479 (U.S. May 28, 2002) 29

Florida Prepaid Postsecondary Educ. Expense Bd. v. College Sav. Bank, 527 U.S. 627 (1999) ... 29

Gambro Lundia AB v. Baxter Healthcare Corp., 110 F.3d 1573 (Fed. Cir. 1997) 19

Graham v. John Deere Co., 383 U.S. 1 (1966) ..... *passim*

Hotchkiss v. Greenwood, 52 U.S. (11 How.) 248 (1851) 2

Huang, In re, 100 F.3d 135 (Fed. Cir. 1996) 26

Hybritech Inc. v. Monoclonal Antibodies, Inc., 802 F.2d 1367 (Fed. Cir. 1986) 18

Jungersen v. Ostby & Barton Co., 335 U.S. 560 (1949) 4, 13

Kaiser Indus. Corp. v. McLouth Steel Corp., 400 F.2d 36 (6th Cir. 1968) 22

Karsten Mfg. Corp. v. Cleveland Golf Co., 242 F.3d 1376 (Fed. Cir. 2001) 17

Kotzab, In re, 217 F.3d 1365 (Fed. Cir. 2000) 16

Lear, Inc. v. Adkins, 395 U.S. 653 (1969) 10, 25

Lee, In re, 277 F.3d 1338 (Fed. Cir. 2002) 16, 26

Lee Blacksmith, Inc. v. Lindsay Bros., Inc., 605 F.2d 341 (7th Cir. 1979) 22

L.S. Donaldson Co. v. La Maur, Inc., 299 F.2d 412 (8th Cir. 1962) 22

Nelmor Corp. v. Jervis Corp., 354 F.2d 923 (6th Cir. 1966) 22

Owens-Illinois, Inc. v. Emhart Indus., Inc., 644 F.2d 98 (2d Cir. 1981) 22

Pope Mfg. Co. v. Gormully, 144 U.S. 224 (1892) 10, 25

Research Corp. v. NASCO Indus., Inc., 501 F.2d 358 (7th Cir. 1974) 22

Reynolds Metals Co. v. Acorn Bldg. Components, Inc., 548 F.2d 155 (6th Cir. 1977) 23

Richdel, Inc. v. Sunspool Corp., 714 F.2d 1573 (Fed. Cir. 1983) 21

Roanwell Corp. v. Plantronics, Inc., 429 U.S. 1004 (1976) 2

Robertson, In re, 169 F.3d 743 (Fed. Cir. 1999) .. 26

Rouffet, In re, 149 F.3d 1350 (Fed. Cir. 1998) . 17, 27

Ruiz v. A.B. Chance Co., 234 F.3d 654 (Fed. Cir. 2000) 18, 27

Sakraida v. Ag Pro, Inc., 425 U.S. 273 (1976) ..... *passim*

Schreiber, In re, 128 F.3d 1473 (Fed. Cir. 1997) .. 26

Simmons Fastener Corp. v. Illinois Tool Works, Inc., 739 F.2d 1573 (Fed. Cir. 1984) 18, 19

Smiths Indus. Med. Sys., Inc. v. Vital Signs, Inc., 183 F.3d 1347 (Fed. Cir. 1999) 7

Stratoflex, Inc. v. Aeroquip Corp., 713 F.2d 1530 (Fed. Cir. 1983) 18, 19, 20

Tec Air, Inc. v. Denso Mfg. Michigan Inc., 192 F.3d 1353 (Fed. Cir. 1999) 19

United States v. Adams, 383 U.S. 39 (1966) .. 13, 27

Warner-Jenkinson Co. v. Hilton Davis Chem. Co., 520 U.S. 17 (1997) 29

Winner Int'l Royalty Corp. v. Wang, 202 F.3d 1340 (Fed. Cir.), *cert. denied*, 530 U.S. 1238 (2000) 19

Zurko, In re, 258 F.3d 1379 (Fed. Cir. 2001) 16

CONSTITUTION AND STATUTES

U.S. Const. Art. I, § 8, Cl. 8 ..... 1, 11

Patent Clause 1, 10, 75a

Administrative Procedure Act, 5 U.S.C. §§ 701 *et seq.* 24

Patent Act of 1952, 35 U.S.C. §§ 1 *et seq.*:

35 U.S.C. § 101 ..... 1, 10, 11, 75a

35 U.S.C. § 102 26

35 U.S.C. § 103 ..... *passim*

35 U.S.C. § 103(a) 1, 11, 75a

28 U.S.C. § 1254(1) 1

28 U.S.C. § 1295 ..... 3, 23

28 U.S.C. § 1295(a) 22

OTHER MATERIALS

Martin J. Adelman, Randall R. Rader, John R. Thomas & Harold C. Wegner, *Cases and Materials on Patent Law* (1998) 27, 28

Robert Desmond, *Nothing Seems "Obvious" to the Court of Appeals for the Federal Circuit: The Federal Circuit, Unchecked by the Supreme Court, Transforms the Standard of Obviousness Under the Patent Law*, 26 Loy. L.A. L. Rev. 455 (1993) 20, 26

Paul M. Janicke, *To Be or Not To Be: The Long Gestation of the U.S. Court of Appeals for the Federal Circuit (1887-1982)*, 69 Antitrust L.J. 645 (2002) 21

Edmund Kitch, *Graham v. John Deere Co.: New Standards for Patents*, [1966] Sup. Ct. Rev. 293 27

Daniel J. Meador, *Origin of the Federal Circuit: A Personal Account*, 41 Am. U. L. Rev. 581 (1992) 29

Robert P. Merges, *Commercial Success and Patent Standards: Economic Perspectives on Innovation*, 76 Cal. L. Rev. 803 (1988) 27

Eugene R. Quinn, Jr., *Abusing Intellectual Property Rights in Cyberspace: Patent Misuse Revisited*, 28 Wm. Mitchell L. Rev. 955 (2002) 2

Simon Rifkind, *A Specialized Court for Patent Litigation? The Danger of a Specialized Judiciary*, 37 ABA J. 425 (1951) 29

OPINIONS BELOW

The opinion of the court of appeals (App. 1a-26a) is reported at 278 F.3d 1366. The opinion of the district court (App. 27a-72a) is not reported.

JURISDICTION

The judgment of the court of appeals was entered on February 5, 2002. On April 29, 2002, the Chief Justice extended the time for filing a petition for a writ of certiorari to and including June 5, 2002. App. 74a. The jurisdiction of this Court is invoked under 28 U.S.C. § 1254(1).

CONSTITUTIONAL AND STATUTORY PROVISIONS INVOLVED

The Patent Clause of the United States Constitution, Art. I, § 8, Cl. 8, and the relevant provisions of the Patent Act, 35 U.S.C. §§ 101 and 103(a), are set forth in the Appendix at 75a.

STATEMENT

1. a. The Patent Clause of the Constitution grants Congress the power to issue patents to promote technological progress. That power is limited, however, and does not authorize the government to issue patents for technological improvements that are not true inventions. U.S. Const. Art. I, § 8, Cl. 8; *Graham v. John Deere Co.*, 383 U.S. 1, 5-6 (1966). "Innovation, advancement, and things which add to the sum of useful knowledge are inherent requisites in a patent system which by constitutional command must 'promote the Progress of . . . useful Arts.'" *Id.* at 6. Unless the constitutional requisites are satisfied, proliferation of unworthy patents covering technical advances that are obvious would hinder rather than promote technological progress.[1] For that reason, a

---

[1] Professor Quinn has rephrased *Graham*'s logic in these economics-oriented terms: "We tolerate patents because of a perceived societal benefit from increased innovation. We recognize that free market economics will be skewed because of the exclusive rights conveyed by the

standard for the amount of technical merit that an innovation must have to qualify for a patent is essential to the operation of the patent system. Congress has respected that limitation, recognizing that it has no power to "enlarge the patent monopoly without regard to the innovation, advancement or social benefit gained thereby." *Id.*

From the first patent law adopted in 1790, it was recognized that an innovation should receive a patent monopoly only if it represented an unobvious technological advance. *Id.* at 7. In 1851, for example, this Court held in *Hotchkiss v. Greenwood*, 52 U.S. (11 How.) 248 (1851), that the proper measure of technical merit for an unobvious invention was whether the candidate for a patent monopoly exceeded the routine skill of an ordinary artisan. A century later, Congress codified the *Hotchkiss* standard of obviousness by enacting § 103 of the 1952 Patent Act. In *Graham*, a unanimous Court stressed that § 103 mandates the same inventive standard as is expressed in the Constitution and embodies the same level of required technological merit. 383 U.S. at 6; *see also Roanwell Corp. v. Plantronics, Inc.*, 429 U.S. 1004, 1005 (1976) (White, J., dissenting from denial of certiorari) ("This Court long ago established that the *sine qua non* of patentability is 'invention' and that the protection of the patent law does not extend to an 'improvement [that] is the work of the skilled mechanic, not that of the inventor.'") (quoting *Hotchkiss*, citing *Graham*) (alteration in original). The Court added that the standard of patentability "has remained invariable in this Court." 383 U.S. at 19.

---

issued patent. The question, however, is to what extent are we willing to accept the burdens placed upon us by innovations that seem hardly worthy of the mantle of patent protection?" Eugene R. Quinn, Jr., *Abusing Intellectual Property Rights in Cyberspace: Patent Misuse Revisited*, 28 Wm. Mitchell L. Rev. 955, 998 (2002).

Between 1966 and 1976, this Court handed down five opinions explaining and clarifying the inventive standard set forth in § 103; it has not addressed the issue since. In 1982, Congress created the United States Court of Appeals for the Federal Circuit and granted it exclusive intermediate appellate jurisdiction in federal cases arising under patent law. 28 U.S.C. § 1295. In the last 20 years, unreviewed by this Court, the Federal Circuit has created a different inventive standard under § 103.

b. Whether a supposed invention is obvious is a question of law based on several underlying factual determinations. *Graham*, 383 U.S. at 17. While the factual determinations are subject to deferential review, the legal conclusion is subject to de novo appellate review. The proper legal test of obviousness is purely an issue of law, a matter of statutory construction of § 103 of the Patent Act, whose ultimate determination is confided to this Court. This petition does not concern the factual determinations made below; it is concerned only with the proper construction of § 103, and the application of that construction to the undisputed facts of record in this case.

2. a. In 1997, respondent Vulcan Engineering Co., Inc. ("Vulcan") and petitioners FATA Aluminium, Inc. and FATA Group, S.p.A. (collectively, "FATA") submitted competing bids to supply automobile engine block and cylinder head metal casting lines for General Motors Corporation's Power Train Division at Saginaw, Michigan (App. 3a, 37a). FATA underbid Vulcan for part of the project, and GM awarded a part of the project to FATA (App. 3a-4a, 39a). Vulcan then asserted to GM (App. 4a, 39a-40a) that the only way FATA could meet the technical specifications of GM's bid proposal was to infringe Vulcan's patent (U.S. Patent No. 4,736,787 – the "Vulcan patent").

The Vulcan patent covers a system for continuously-linked molding of metal parts, such as automobile engine blocks, using the "lost foam" process. The

lost foam process is a variation on the "lost wax" process, in which lost plastic foam substitutes for lost wax.[2] Claim 1 of the Vulcan patent, the only one in issue (App. 28a), covers a lost foam casting system having these elements in combination (App. 3a, 28a-29a):

- a set of gondolas connected to one another with pivots; the gondolas carry flasks around a track;
- a drive mechanism for start-stop movement of the gondolas;
- a number of flasks (very big cups, big enough to hold engine blocks) that are adapted to fit into the gondolas and thus be carried around the track; the flasks are adapted to contain foam patterns that form the molds for casting engine blocks; and
- a closed curved track, on which the gondolas move and on which are located:
  - a sand loading and compaction station (at which sand is poured into the flasks containing foam patterns; the sand forms a mold around each foam pattern; then the sand is compacted);
  - a metal pouring station (at which molten metal is poured into the molds, replacing the foam patterns and destroying them); and
  - a mold unloading system (which unloads engine blocks or other cast metal parts from the molds by dumping the sand/metal contents out of the flask).

---

[2] App. 27a-28a. The lost foam process is described in the 1958 Shroyer patent (App. 32a). Vulcan does not claim to have invented that process. This Court previously considered a variation on the lost wax process for molding metal parts in *Jungersen v. Ostby & Barton Co.*, 335 U.S. 560 (1949). The wax, which helps form a mold in the shape of the final metal object, is "lost" when it is melted during introduction of the molten metal. In the lost foam process, the plastic foam helps form a mold in sand surrounding it; the molten metal destroys the foam when introduced during the process, and the foam is "lost."

The system is akin to a big electric model railroad set with an oval track, on which all of the boxcars of the train are pulled around in a continuously-linked process.[3] Each boxcar has a flask in it, into which a foam pattern is placed. Sand is dropped into each flask and forms a mold around each foam pattern. The molds are then filled with molten metal, which assumes the shape of the pattern and solidifies; the molten metal vaporizes the foam. The molds are unloaded when the cast metal parts in them have sufficiently cooled.

b. Vulcan sued FATA for patent infringement under the Vulcan patent. FATA asserted various defenses, including that Vulcan's patent was invalid because the alleged invention was obvious under § 103 and therefore lacked enough technical merit to justify a patent monopoly. FATA also counterclaimed for a declaration of invalidity on the same basis. Trial by jury was waived.

The prior art in the record of this case showed the existence of prior knowledge in the industry of various subcombinations of the combination of elements that Vulcan patented. Continuously-linked processes were previously in use for sand molding systems, but not for *lost foam* sand molding systems. App. 51a. Lost foam automated systems were in use for sand molding, but not for *continuously-linked* sand molding. App. 51a, 52a. Another lost foam system was similar to that of the Vulcan patent, but it placed the flasks on a powered roller conveyer instead of putting them into gondolas. App. 52a-53a. Finally, although technically not prior art, another GM casting system

---

[3] In a "continuously-linked" process, all of the boxcars (i.e., flask-containing gondolas) are connected to one another in a single train. (The Federal Circuit at times in its opinion refers to such systems as "continuous" ones.) In the opposite kind of process (an "accumulating" process), the gondolas are not connected and move independently of one another. Continuously-linked casting systems have been in use since 1941. App. 33a. Vulcan does not claim to be their inventor.

evidenced the state of knowledge of other workers in the art before the alleged invention; this system was virtually identical to that of the Vulcan patent but it used a rotating turntable, instead of gondolas on an oval track, to circulate the mold-containing flasks. App. 52a. Accordingly, all of the claimed elements (subsystems) of the patented system were previously known or in use in other metal-parts sand-molding systems, where the elements performed the same functions that they perform in the patented system. Those elements were not all present in combination and in the identical arrangement of the Vulcan patent, however, in any single one of the various prior art systems.

In addition to the prior art, the district court considered two other factors, which the Federal Circuit emphasized on appeal. It found, even though all the claimed elements of Vulcan's system were present in prior art systems, that no reference in the record suggested combining these elements in the same way as Vulcan combined them. App. 55a-56a. The court also considered evidence of the commercial success of Vulcan's product. Vulcan asserted that, due to its patent, since 1987 it "has dominated the market for lost foam casting production systems." Vulcan Fed. Cir. Br. 11. The court did not address whether Vulcan's claimed market power was the result of the merit of Vulcan's patented innovation; instead, it presumed such a causal *nexus*. App. 56a.

The district court found FATA liable to Vulcan for patent infringement, rejecting FATA's contentions that Vulcan's patent was obvious in light of the prior art. The court applied the following standard to resolve the obviousness issue: "'[T]here is no basis for concluding that an invention would have been obvious solely because it is a combination of elements that were known in the art at the time of the invention. Instead, the relevant inquiry is whether there is a reason, suggestion, or motivation in the prior art

that would lead one of ordinary skill in the art to combine the references, and that would also suggest a reasonable likelihood of success.'" App. 50a-51a (quoting *Smiths Indus. Med. Sys., Inc. v. Vital Signs, Inc.*, 183 F.3d 1347, 1356 (Fed. Cir. 1999)). The court entered a final judgment (App. 73a) holding FATA liable to Vulcan for $2.5 million and enjoined FATA from infringing the patent.

3. The Federal Circuit affirmed. App. 1a-26a. In determining whether the combination of old elements was obvious, the Federal Circuit emphasized that no prior art document specifically taught or suggested combining into one system all of the elements of the patented system. The Federal Circuit deemed that factor determinative (App. 5a):

> The district court found that there was no teaching, suggestion, or reason in the prior art to select aspects of the prior art and combine them in the manner of the '787 system. *See Karsten Mfg. Corp. v. Cleveland Golf Co.*, 242 F.3d 1376, 1385, 58 USPQ2d 1286, 1293 (Fed.Cir.2001) ("In holding an invention obvious in view of a combination of references, there must be some suggestion, motivation, or teaching in the prior art that would have led a person of ordinary skill in the art to select the references and combine them in the way that would produce the claimed invention."); *C.R. Bard, Inc. v. M3 Sys., Inc.*, 157 F.3d 1340, 1352, 48 USPQ2d 1225, 1232 (Fed.Cir. 1998) (a showing of a suggestion, teaching, or motivation to combine the prior art references is an "essential evidentiary component of an obviousness holding").

In addition, the Federal Circuit considered Vulcan's commercial success and the "[a]ppreciation by contemporaries skilled in the field of the invention" to be more significant than the presence of all the claimed elements of the patented combination in prior art casting systems (App. 6a):

The district court gave weight to the commercial success of the Vulcan '787 system. *See Demaco Corp. v. F. Von Langsdorff Licensing Ltd.*, 851 F.2d 1387, 1391, 7 USPQ2d 1222, 1225 (Fed. Cir.1988) ("The commercial response to an invention is significant to determinations of obviousness, and is entitled to fair weight.") The record shows contemporaneous recognition of the achievements of the Vulcan system, including articles in trade journals and testimony of witnesses concerning the belief in the engineering community that the lost foam process could not be effectively mechanized as a continuous on-line process. Appreciation by contemporaries skilled in the field of the invention is a useful indicator of whether the invention would have been obvious to such persons at the time it was made. *See Stratoflex, Inc. v. Aeroquip Corp.*, 713 F.2d 1530, 1538, 218 USPQ 871, 879 (Fed.Cir.1983) ("evidence of secondary considerations may often be the most probative and cogent evidence in the record").

The Federal Circuit therefore upheld the patent as unobvious and affirmed the judgment that FATA was liable for patent infringement.

REASONS FOR GRANTING THE PETITION

The standard that the Federal Circuit employed to uphold the patent in this case directly conflicts with the standard of what is an obvious technical improvement under *Graham* and its progeny. Indeed, the only way that the court below was able to uphold this patent was (i) to trump the *Graham* primary considerations with secondary considerations, and (ii) to engraft on the *Graham* test a further evidentiary requirement that is not found in *Graham* and that contradicts this Court's subsequent interpretation of *Graham*. But for Congress's conferring exclusive patent jurisdiction on the Federal Circuit in 1982, this case would have been decided differently under then-

prevailing regional circuit applications of *Graham*. The Federal Circuit's remaking of patent law should not be left unreviewed, because that court's new standard is seriously damaging the patent system.

I. UNDER THIS COURT'S LEGAL TEST FOR OBVIOUSNESS, THE VULCAN PATENT WOULD BE INVALID

This Court has always interpreted § 103 in terms of the constitutional standard of invention, which *Graham* describes. Under that test, the Vulcan patent is invalid because it gives a statutory monopoly to a slight improvement in technology that is unworthy of patent protection.

A. This Court's Test for What Is Obvious Has Consistently Focused on the Level of Inventive Merit of the Patented Device Relative to the Prior Art

It has long been recognized that the patent system needs a proper balance between providing incentives to inventors and protecting the rights of the public to competition and industrial progress.[4] This Court observed more than a century ago:

> It was never the object of those laws to grant a monopoly for every trifling device, every shadow of a shade of an idea, which would naturally and spontaneously occur to any skilled mechanic or operator in the ordinary progress of manufactures. Such an indiscriminate creation of exclusive privileges tends rather to obstruct than to

---

[4] "The Patent Clause itself reflects a balance between the need to encourage innovation and the avoidance of monopolies which stifle competition without any concomitant advance in the 'Progress of Science and useful Arts.' . . . From their inception, the federal patent laws have embodied a careful balance between the need to promote innovation and the recognition that imitation and refinement through imitation are both necessary to invention itself and the very lifeblood of a competitive economy." *Bonito Boats, Inc. v. Thunder Craft Boats, Inc.*, 489 U.S. 141, 146 (1989).

> stimulate invention. It creates a class of speculative schemers who make it their business . . . to lay a heavy tax upon the industry of the country, without contributing anything to the real advancement of the art.

Atlantic Works v. Brady, 107 U.S. 192, 200 (1883). The requirement of § 103 that patents must not be awarded to obvious improvements in technology acts as a constitutionally mandated filter in the patent system, to ensure that patent monopolies are allowed, and that the public pays tribute, only on true inventions and not on trivial mechanical advances.[5]

In 1952, Congress first created an explicit statutory standard for obviousness (35 U.S.C. § 103). First, § 101 of the 1952 Act replicates the Patent Clause by stating that "[w]hoever *invents* or *discovers* any new and useful . . . machine . . . may obtain a pat-

---

[5] "Even if a particular combination of elements is 'novel' in the literal sense of the term, it will not qualify for federal patent protection if its contours are so traced by the existing technology in the field that the 'improvement is the work of the skillful mechanic, not that of the inventor.' . . . The nonobviousness requirement extends the field of unpatentable material beyond that which is known to the public under [35 U.S.C.] § 102, to include that which could readily be deduced from publicly available material by a person of ordinary skill in the pertinent field of endeavor. Taken together, the novelty and nonobviousness requirements express a congressional determination that the purposes behind the Patent Clause are best served by free competition and exploitation of either that which is already available to the public or that which may be readily discerned from publicly available material. . . . The novelty and nonobviousness requirements of patentability embody a congressional understanding, implicit in the Patent Clause itself, that free exploitation of ideas will be the rule, to which the protection of a federal patent is the exception. . . . To a limited extent, the federal patent laws must determine not only what is protected, but also what is free for all to use." *Bonito Boats*, 489 U.S. at 150-51 (citation omitted). *See also Lear, Inc. v. Adkins*, 395 U.S. 653, 663-64 (1969) ("'It is as important to the public that competition should not be repressed by worthless patents, as that the patentee of a really valuable invention should be protected in his monopoly'") (quoting *Pope Mfg. Co. v. Gormully*, 144 U.S. 224, 234 (1892)).

ent therefor, subject to the conditions and requirements of this title." *Id.* § 101 (emphases added). Section 103(a) then states that "[a] patent may *not* be obtained . . . if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been *obvious* . . . to a person having ordinary skill in the art to which said subject matter pertains." *Id.* § 103(a) (emphases added).

This Court in *Graham* and in subsequent cases developed a consistent interpretation of § 103 to harmonize the statute with the Constitution, which gives Congress power "[t]o promote the Progress of Science and Useful Arts, by securing for limited Times to . . . *Inventors* the exclusive Right to their respective . . . *Discoveries*." Art. I, § 8, Cl. 8 (emphases added). The Court concluded that Congress intended the standard of obviousness under § 103 to coincide with the standard of the Constitution for *Discoveries* of *Inventors* (terminology echoed in § 101). *See Graham*, 383 U.S. at 6.[6] By interpreting § 103 in terms of the constitutional meaning of Discoveries of Inventors, the Court avoided the risk of an unconstitutional construction of the statute.

Graham and its progeny prescribe a test for whether a technical advance is unobvious and therefore qualified to become subject to a patent monopoly. That test focuses on (1) the scope and content of the prior art; (2) the ordinary level of skill of those working in the art; and (3) the differences between the

---

[6] *Anderson's-Black Rock, Inc. v. Pavement Salvage Co.*, 396 U.S. 57 (1969), echoes this point: "The patent standard [of § 103] is basically constitutional." *Id.* at 61. Then, in *Dann v. Johnston*, 425 U.S. 219 (1976), the Court stated that "an exercise of the inventive faculty . . . has long been regarded as an absolute prerequisite to patentability," a legal principle that Congress embodied in § 103 by "framing it as a requirement of 'nonobviousness.'" *Id.* at 225-26 (citation and internal quotation marks omitted). *See also Sakraida v. Ag Pro, Inc.*, 425 U.S. 273, 279 (1976) ("the Constitution requires . . . 'invention'").

elements set forth in the patent claims at issue and in the prior art. Based on its analysis of these factual "primary considerations," a court must then determine whether, as a matter of law,[7] the advance of the claimed subject matter over the prior art is obvious, *id.* at 17, or, as the Court restated the test in *Johnston*, "[t]he gap between the prior art and respondent's system is simply not so great as to render the system" not obvious, 425 U.S. at 230.[8]

In determining obviousness, courts also may consider "[s]uch secondary considerations as commercial success," which "might be utilized to give light to the circumstances surrounding the origin of the subject matter sought to be patented." *Graham*, 383 U.S. at 17-18. Secondary considerations "may lend a helping hand to the judiciary," because judges lack technical expertise, *id.* at 36, and considering such factors may help "guard against slipping into use of hindsight," but that is all the secondary factors can do, *id.* (internal quotation marks omitted). If it is not a close case, as it was not in *Graham*, "these factors do not . . . tip the scales of patentability." *Id.*;[9]

---

[7] "The ultimate test of patent validity is one of law, . . . but resolution of the obviousness issue necessarily entails several basic factual inquiries." *Ag Pro*, 425 U.S. at 280 (citing *Graham*).

[8] In *Bonito Boats*, the Court further restated this test as one excluding from patentability "that which could readily be deduced from publicly available material by a person of ordinary skill in the pertinent field of endeavor." 489 U.S. at 150.

[9] In applying this legal test to the plow patent before it in the *Graham* case, the Court considered two earlier patents, which had all of the elements of the patent at issue, except that some plow elements were arranged slightly differently. The Court said that it would assume that no single item of prior art "disclose[d] such an arrangement as petitioners claim in [their] patent," 383 U.S. at 24, but based on the three factual inquiries of the *Graham* test the only difference between the claimed subject matter and the combined prior art was obvious. In a part of the opinion involving spray cans, the Court found obviousness based on two of the patents in the relevant art containing all of the elements of the patented claim. The Court rejected the patentee's invocation of second-

Jungersen, 335 U.S. at 567. Nowhere in *Graham* did the Court suggest that a court must or should make a general practice of inquiring beyond the three primary considerations identified in that decision. The *Graham* Court did not look for any teaching, suggestion, or motivation in the prior art to combine the references on which it relied to find obviousness. And it rejected the notion that secondary considerations, such as commercial success, could make a claim patentable where "the differences between [the claim] and the pertinent prior art would have been obvious" based on the primary considerations. 383 U.S. at 35-37. (The same-day companion decision in *United States v. Adams*, 383 U.S. 39 (1966), did not bear on this issue.)

In each case construing § 103 after *Graham*, this Court has strictly applied the *Graham* test and its primary considerations to the record before it. The Court has never imposed any additional requirements for establishing obviousness or created any exceptions to make unobvious a technical advance that the *Graham* primary-considerations test made obvious. Twice, in *Black Rock* and *Ag Pro*, the Court rejected a patentee's reliance on commercial success when an alleged invention failed to pass muster under the *Graham* primary considerations.

Black Rock applied the *Graham* test to a patent whose four elements occurred separately in a patent and prior art machines. The combination of the four elements in one device created additional convenience and commercial success, but (as in the case at bar) no new or different function. *See* 396 U.S. at 60. The Court stated that "strict observance" of the *Graham* test was necessary to carry out congressional intent, and it said that more than creating convenience and a "successful venture" was necessary to

---

ary considerations, including commercial success of the patented can, to override the primary considerations. *Id.* at 35-36.

make the combination of the four elements not obvious. *Id.* at 62-63 (internal quotation marks omitted).

In *Johnston*, this Court applied the *Graham* factors to a combination of a patent and information about data processing equipment known to be used in the banking industry. The Court focused on whether the differences between the total prior art and claimed subject matter were sufficient to make the supposed invention unobvious. The Court considered the magnitude of the differences and held: "The gap between the prior art and respondent's system is simply not so great as to render the system nonobvious." 425 U.S. at 230. The Court did *not* make any inquiry into whether the prior art contained any teaching, suggestion, or motivation to combine the references.

Finally, in *Ag Pro*, the Court considered a system for cleaning stables by flushing them with water. Six patents contained all of the elements of the supposed invention except an abrupt water-release feature akin to flushing a toilet. *See* 425 U.S. at 276-77, 281. Despite its "enjoying commercial success," the patented combination was held obvious. *Id.* at 282. Again, the Court did not make any inquiry into whether the prior art contained any teaching, suggestion, or motivation to combine the references.

B. Vulcan's Patent Is Invalid Under the *Graham* Primary Considerations

This patent does not pass muster under this Court's *Graham* test. Prior art molding systems disclosed all of the patent's claimed elements, performing there the same functions as in the patented system. *Supra* p.6. Under a *Graham* analysis, Vulcan's system is on a par with Graham's plow. In both cases, while "the prior art does not disclose such an arrangement as [patentees] claim in [their] patent," 383 U.S. at 24, nonetheless all of the claimed elements were present (differently arranged) in various prior art devices, *see id.* at 22-23, 26 (Graham's device); *supra* pp. 5-6 (Vulcan's device). In addition,

the claimed elements performed the same functions in the prior art systems and in Vulcan's system, *supra* p.6, as was true of the plow "stirrup" and "hinge plate" in *Graham*, 383 U.S. at 26. Moreover, in *Black Rock*[10] and *Ag Pro*,[11] that identical fact pattern – same elements performing same function – established that the differences between the patent and the prior art were so insubstantial that the patent was obvious under a *Graham* primary-considerations analysis.

Nonetheless, the Federal Circuit salvaged the instant patent (i) because FATA could not find a specific teaching, suggestion, or motivation, documented in the prior art, to combine the old elements in the very manner that the patent combined them, and (ii) by holding that commercial success trumped the *prima facie* case of obviousness based on the *Graham* primary factors. Absent these errors, the patent would have been invalidated as obvious.

---

[10] In *Black Rock*, the Court held obvious a commercially successful machine whose known elements, when combined, did not produce a "new or different function." 396 U.S. at 60 (internal quotation marks omitted).

[11] In *Ag Pro*, this Court held obvious a commercially successful patented barn flushing system, because "this patent simply arranges old elements with each performing the same function it had been known to perform, although perhaps producing a more striking result than in previous combinations." 425 U.S. at 282. The *Ag Pro* Court cautioned: "A patent for a combination which only unites old elements with no change in their respective functions . . . obviously withdraws what already is known into the field of its monopoly and diminishes the resources available to skillful men." *Id.* at 281 (internal quotation marks omitted). *Graham* holds that Congress lacks power to authorize patents that withdraw from the public domain what is already known or available and thus add nothing to the body of useful knowledge. *See* 383 U.S. at 6.

II. THE FEDERAL CIRCUIT'S LEGAL TEST FOR OBVIOUSNESS CONFLICTS WITH *GRAHAM* AND ITS PROGENY

Since its creation in 1982, the Federal Circuit has developed a construction of § 103 that differs in material respects from a *Graham* analysis. The technological improvement at issue here was an obvious advance that could not earn a patent monopoly under *Graham*, but the Federal Circuit applied a legal test that transformed it into a valid patent.

A. The Federal Circuit has added to the *Graham* primary-considerations test a further required factual showing: that a patent challenger must always produce probative evidence of a teaching, suggestion, or motivation in the prior art (for example, in another patent) that *specifically* suggests to ordinary artisans that they ought to combine the elements of the two or more prior art references that together disclose the elements of the supposed invention.[12] In the present

---

[12] The evidence of a prior art suggestion to combine references must be specific, *see In re Lee*, 277 F.3d 1338, 1343 (Fed. Cir. 2002) ("The need for specificity pervades this authority [on combining references].") (collecting cases), and it must be documented, *see id.* ("It must be based on objective evidence of record."). The suggestion to combine references cannot flow merely from application of "common sense." *Id.* at 1344 (holding that Patent and Trademark Office ("PTO") cannot combine references to find obviousness simply on basis of "common sense"); *see In re Zurko*, 258 F.3d 1379, 1385-86 (Fed. Cir. 2001) (PTO "cannot simply reach conclusions based on its own understanding or experience – or on its assessment of what would be basic knowledge or common sense").

Express findings of a suggestion in the prior art to combine the references relied upon under § 103 must be made by the district courts in infringement cases and by the PTO in denying patents. *See, e.g., Ashland Oil, Inc. v. Delta Resins & Refractories, Inc.*, 776 F.2d 281, 297 & n.24 (Fed. Cir. 1985) (district court must "elucidate any factual teachings, suggestions or incentives from th[e] prior art" showing propriety of combination and must make findings on suggestion to combine); *In re Kotzab*, 217 F.3d 1365, 1371 (Fed. Cir. 2000) ("[P]articular findings must be made [by PTO] as to the reason the skilled artisan, with no knowledge of the claimed invention, would have selected these components for combination in the manner claimed."); *In re Dembiczak*, 175

case, that additional teaching, suggestion, or motivation in the prior art was found lacking. Therefore, the Federal Circuit deemed it legally insufficient that petitioners' references – just as in *Graham*, *Black Rock*, and *Ag Pro* – contained elements corresponding to and performing in the same way as all of the claimed elements of Vulcan's patent (App. 5a-6a; *supra* pp. 5-6). The present case is not a "sport." It reflects now-settled Federal Circuit doctrine.[13]

The Federal Circuit's requirement of a prior art teaching, suggestion, or motivation finds no support in the text of § 103 and conflicts with *Graham* and this Court's later decisions, none of which recognizes any such requirement under § 103. In contrast to the Federal Circuit's obviousness methodology, each time this Court has found a patent obvious under § 103, it did so without locating in the prior art any such teaching, suggestion, or motivation to combine elements. Instead, the Court simply pointed to the fact that the same elements were present in prior art devices, where a skilled artisan could have located them, had he looked. Thus, in *Graham*, the Court said: "It is . . . irrelevant that no one apparently

---

F.3d 994, 1000 (Fed. Cir. 1999) ("Because we do not discern any finding by the [PTO] that there was a suggestion, teaching, or motivation to combine the prior art references cited against the pending claims, the [PTO's] conclusion of obviousness, as a matter of law, cannot stand.").

[13] *See, e.g.*, *Karsten Mfg. Corp. v. Cleveland Golf Co.*, 242 F.3d 1376, 1385 (Fed. Cir. 2001) ("In holding an invention obvious in view of a combination of references, there must be some suggestion, motivation, or teaching in the prior art that would have led a person of ordinary skill in the art to select the references and combine them in the way that would produce the claimed invention.") (collecting cases); *ATD Corp. v. Lydall, Inc.*, 159 F.3d 534, 546 (Fed. Cir. 1998) ("There must be a teaching or suggestion within the prior art, or within the general knowledge of a person of ordinary skill in the field of the invention, to look to particular sources of information, to select particular elements, and to combine them in the way they were combined by the inventor.") (collecting cases); *In re Rouffet*, 149 F.3d 1350, 1355-56 (Fed. Cir. 1998); *In re Chu*, 66 F.3d 292, 298 (Fed. Cir. 1995).

chose to avail himself of knowledge stored in the Patent Office." 383 U.S. at 36.[14]

B. Moreover, the Federal Circuit has turned upside down the ranking of *Graham*'s "primary" and "secondary" obviousness factors. *Graham* and this Court's other § 103 decisions direct lower courts to focus on the primary factors and to consider secondary factors, such as commercial success, only in close cases where they might tip the balance. In contrast, the Federal Circuit requires that secondary factors must be considered in every case (not just in close or doubtful cases), and that the secondary considerations are more important as indicators of unobviousness than the primary considerations that this Court identified in *Graham*.[15] Indeed, the Federal Circuit has gone so far as to hold that, as in the present case, the secondary considerations will trump a *prima facie* of obviousness based on the *Graham* primary considerations.[16] Moreover, the Federal Circuit

---

[14] The principle is not limited to "knowledge stored in the Patent Office." In *Black Rock*, the Court applied the same principle to machines that competitors had previously sold.

[15] *Ruiz v. A.B. Chance Co.*, 234 F.3d 654, 667 (Fed. Cir. 2000) ("Our precedents clearly hold that secondary considerations . . . must be considered in determining obviousness."); *Custom Accessories, Inc. v. Jeffrey-Allan Indus., Inc.*, 807 F.2d 955, 960-61 (Fed. Cir. 1986) (holding that "[f]ailure to consider such evidence [of commercial success] is clearly error" and reversing district court for following regional circuit precedents that commercial success "without invention will not make patentability") (internal quotation marks omitted); *Hybritech Inc. v. Monoclonal Antibodies, Inc.*, 802 F.2d 1367, 1380 (Fed. Cir. 1986) (commercial success "must be considered *before* a conclusion on obviousness is reached and is not merely 'icing on the cake'"); *Stratoflex, Inc. v. Aeroquip Corp.*, 713 F.2d 1530, 1538-39 (Fed. Cir. 1983) ("not just when the decisionmaker remains in doubt").

[16] *Simmons Fastener Corp. v. Illinois Tool Works, Inc.*, 739 F.2d 1573 (Fed. Cir. 1984), is illustrative of the preemptive effect of commercial success. The district court used the *Graham* primary factors to find the patent clearly obvious; then, following pre-1982 local circuit precedent, it refused to consider commercial success and invalidated the patent. The Federal Circuit reversed "because the trial court erred as a matter

maintains that it must be presumed that the merits of the alleged invention caused commercial success, so that the patentee is not obliged to show (as it did not show here) any causal *nexus* linking commercial success to inventive merit.[17]

The Federal Circuit's reliance on commercial success and other secondary considerations to trump the *Graham* primary factors flatly conflicts with this

---

of law in refusing to consider" commercial success. *Id.* at 1574-75. The Federal Circuit then quoted its own precedents, holding that evidence of commercial success must always be considered, "'not just when the decisionmaker remains in doubt after reviewing the art.'" *Id.* at 1575 (quoting *Stratoflex*, 713 F.2d at 1539).

The Federal Circuit continues to adhere to and extend its own rules on commercial success. *See, e.g., Winner Int'l Royalty Corp. v. Wang*, 202 F.3d 1340, 1350 (Fed. Cir.) (it is not error to find that commercial success overcomes *Graham* primary factors), *cert. denied*, 530 U.S. 1238 (2000); *Tec Air, Inc. v. Denso Mfg. Michigan Inc.*, 192 F.3d 1353, 1360 (Fed. Cir. 1999) (holding that secondary considerations such as commercial success can rebut *prima facie* case of obviousness based on prior art); *Gambro Lundia AB v. Baxter Healthcare Corp.*, 110 F.3d 1573, 1579-80 (Fed. Cir. 1997) (commercial success and other secondary considerations "are invariably relevant to a determination under Section 103," and commercial success combined with lack of teaching or suggestion to combine references "requires a holding of nonobviousness").

[17] The Federal Circuit did not even pause in this case to ask whether any specific causative or probative relationship existed between the commercial success of the patented system and the actual merits of the supposed advance in technology that it embodied. That was unnecessary to the Federal Circuit, because it has established a presumption that, if a commercially successful product is the same as the patented product, the merits of the invention caused the commercial success, and it is up to the infringer to prove otherwise. *Winner Int'l*, 202 F.3d at 1351; *Tec Air*, 192 F.3d at 1360; *Demaco Corp. v. F. Von Langsdorff Licensing Ltd.*, 851 F.2d 1387, 1394 (Fed. Cir. 1988). The district court stated that it was following this presumption. App. 56a.

The presumption is contrary to this Court's precedent under § 103, because the Court held the supposed inventions obvious in all three § 103 cases (*Graham*, *Black Rock*, and *Ag Pro*) in which commercial success was urged in support of unobviousness. In those cases, this Court did not presume that the commercial success of the patented devices meant that they had inventive merit.

Court's decisions holding patents obvious under § 103 despite their commercial success. In this case, the Federal Circuit supported its reliance on secondary considerations to supersede the *Graham* primary considerations by quoting an earlier Federal Circuit opinion, *Stratoflex*, 713 F.2d at 1538: "evidence of secondary considerations may often be the most probative and cogent evidence in the record." In contrast, in *Ag Pro*, this Court held obvious a commercially successful patented barn flushing system, because the system was obvious under a *Graham* analysis: "this patent simply arranges old elements with each performing the same function it had been known to perform, although perhaps producing a more striking result than in previous combinations." 425 U.S. at 282. Similarly, in *Black Rock*, the Court held a commercially successful machine obvious, regardless of commercial success, because the patent failed under a *Graham* analysis: the known elements, when combined, did not produce a "new or different function." 396 U.S. at 60 (internal quotation marks omitted).

Commentators and academics have observed that the Federal Circuit has superseded Supreme Court law on commercial success and obviousness with a widely different legal standard. *See, e.g.*, Robert Desmond, *Nothing Seems "Obvious" to the Court of Appeals for the Federal Circuit: The Federal Circuit, Unchecked by the Supreme Court, Transforms the Standard of Obviousness Under the Patent Law*, 26 Loy. L.A. L. Rev. 455, 476 (1993) (hereafter "Desmond, *Nothing Seems Obvious*") ("The CAFC rewrote the Supreme Court's *Graham* standard for obviousness by greatly increasing the value of the secondary considerations in its analysis to the point that mere secondary considerations under *Graham* have become

the primary decision-making factors in a court's obviousness analysis.").[18]

C. The Federal Circuit's innovations in the construction of § 103 conflict with this Court's studied effort in *Graham* and its progeny to avoid the risk of an unconstitutional construction of § 103. This Court has harmonized the statute and the Constitution by reading the Constitution's high level of invention into the statute. *See supra* p.11. Thus, when the gap between the prior art and the supposed invention is too slight to satisfy the Constitution's requirement of invention (*i.e.*, the Discovery of an *Inventor*), the supposed invention fails *Graham*'s primary-considerations test. At least, that is what occurs under this Court's analysis, as explained in *Graham* and later decisions. But that is not what occurs in the Federal Circuit's analysis. Instead, the *Graham* primary considerations are trumped either by lack of suggestion in the prior art or by commercial success. The Federal Circuit has effectively read the requirement of invention out of § 103.[19] Clearly, the analysis that the Federal Circuit commands runs the risk of replacing the constitutional standard of invention with a lesser standard, and, by the same token, risks an unconstitutional construction of § 103.

The time has come, after 20 years of increasing Federal Circuit supersession of this Court's obviousness standard with a nonstatutory, conflicting standard, for this Court to restore the interpretation of

---

[18] *See also* Paul M. Janicke, *To Be or Not To Be: The Long Gestation of the U.S. Court of Appeals for the Federal Circuit (1887-1982)*, 69 Antitrust L.J. 645, 662 (2002) (noting that "Federal Circuit has expressly dismantled many of the mechanisms the Supreme Court relied upon when deciding obviousness questions").

[19] "'Invention,' since the advent of § 103, is no longer the prerequisite to patentability which it was prior to 1952." *Richdel, Inc. v. Sunspool Corp.*, 714 F.2d 1573, 1580 (Fed. Cir. 1983).

§ 103 that this Court held in *Graham* is compelled by both the Constitution and congressional intent.

III. THE FEDERAL CIRCUIT'S LEGAL TEST FOR OBVIOUSNESS CONFLICTS WITH THE TEST PREVIOUSLY APPLIED BY THE REGIONAL CIRCUITS

Before exclusive jurisdiction over patent appeals was vested in the Federal Circuit in 1982, *see* 28 U.S.C. § 1295(a), other circuits followed the decisions of this Court under § 103.[20] Before 1982, this case

---

[20] *See, e.g.*, Second Circuit: *Owens-Illinois, Inc. v. Emhart Indus., Inc.*, 644 F.2d 98, 100 (2d Cir. 1981) ("secondary considerations will not support a claim of invention if the subject matter of the patent does not pass the section 103 test of non-obviousness") (collecting cases); *Continental Can Co. v. Old Dominion Box Co.*, 393 F.2d 321, 326 (2d Cir. 1968) ("Commercial success and solution of a long-standing need in the art are secondary considerations which cannot breathe life into a patent otherwise invalid because of obviousness."); Third Circuit: *Continental Can Co. v. Crown Cork & Seal Co.*, 415 F.2d 601, 602 (3d Cir. 1969) (secondary considerations cannot support nonobviousness if patent is obvious on basis of prior art); Fourth Circuit: *American Monorail Co. v. Parks-Cramer Co.*, 245 F.2d 739, 741 (4th Cir. 1957) (commercial success "may be invoked to aid a patent only . . . [in a] doubtful" case); Fifth Circuit: *Cathodic Protection Serv. v. American Smelting & Ref. Co.*, 594 F.2d 499, 513 (5th Cir. 1979) (where claims are clearly obvious based on the *Graham* primary considerations, "we need not examine the secondary considerations"); Sixth Circuit: *Kaiser Indus. Corp. v. McLouth Steel Corp.*, 400 F.2d 36, 41 (6th Cir. 1968) ("these considerations are truly secondary and will not serve as a substitute for" the *Graham* primary factors); *Nelmor Corp. v. Jervis Corp.*, 354 F.2d 923, 925 (6th Cir. 1966) (commercial success, while important in doubtful cases, does not make patents valid if they are obvious from prior art); Seventh Circuit: *Dual Mfg. & Eng'g, Inc. v. Burris Indus., Inc.*, 619 F.2d 660, 666-67 (7th Cir. 1980) (*en banc*) (commercial success cannot overcome *prima facie* case of obviousness based on the *Graham* primary considerations); *Lee Blacksmith, Inc. v. Lindsay Bros., Inc.*, 605 F.2d 341, 345 (7th Cir. 1979) (secondary factors should be considered "[o]nly in a close case") (internal quotation marks omitted); *Research Corp. v. NASCO Indus., Inc.*, 501 F.2d 358, 362 (7th Cir. 1974) (secondary considerations are "useful make-weights in doubtful cases"); Eighth Circuit: *L.S. Donaldson Co. v. La Maur, Inc.*, 299 F.2d 412, 423 (8th Cir. 1962) (evidence of commercial success may be considered only in doubtful cases); Ninth Circuit: *Bristol Locknut Co. v. SPS Techs., Inc.*, 677 F.2d 1277, 1281 (9th Cir. 1982)

would have gone to the Sixth Circuit on appeal. That circuit followed this Court's *Graham* test and presumably would have held the patent invalid as an obvious technical development.[21] But appeals now going to the Federal Circuit result in judgments opposite to those that the regional circuits would have reached before 1982.[22] We recognize that § 1295 means that this type of conflict is only one of principle and that recurring divisions among the courts of appeals can no longer be generated in patent matters. Nonetheless, that law did not empower the Federal Circuit to create a new substantive law for patents – one that is inconsistent with this Court's decisions and those of the regional circuits that decided these issues before the Federal Circuit's creation. The Federal Circuit was created to bring about uniformity in patent law and decrease forum shopping, not to create a new substantive law of patents that supersedes the substantive law of this Court and the regional circuits.

(*Graham*'s secondary factors should be considered only when the *Graham* primary factors are not dispositive); *Alcor Aviation, Inc. v. Radair, Inc.*, 527 F.2d 113, 117 (9th Cir. 1975) (secondary considerations cannot make an obvious method patentable).

[21] *See, e.g., Eltra Corp. v. Basic Inc.*, 599 F.2d 745, 756 (6th Cir. 1979) ("commercial success and the satisfaction of long-felt needs are alone not sufficient to establish that the product" is not obvious); *American Seating Co. v. National Seating Co.*, 586 F.2d 611, 622 (6th Cir. 1978) (holding that, "[a]lthough in a close case secondary factors may tip the scales toward patent validity, they cannot save a patent from invalidity when . . . [as here] obviousness is clear"); *Reynolds Metals Co. v. Acorn Bldg. Components, Inc.*, 548 F.2d 155, 162 (6th Cir. 1977) ("commercial success alone will not render a patent valid").

[22] The Federal Circuit has reversed district court judgments because the district court followed regional circuit law as to obviousness. *See, e.g., Custom Accessories*, 807 F.2d at 960-61 (reversing Northern District of Illinois because the district court followed *en banc* Seventh Circuit precedent, *see Dual Mfg.*, 619 F.2d at 666-67, that commercial success could not overcome a *prima facie* case of obviousness based on the *Graham* primary considerations); *Ashland Oil, supra, reversing* 587 F. Supp. 1406, 1415 (E.D. Mich. 1984) (same, *prima facie* obviousness based on Sixth Circuit precedent and *Ag Pro*).

Christianson v. Colt Indus. Operating Corp., 486 U.S. 800, 820 (1988) (Stevens, J., concurring).

In *Dickinson v. Zurko*, 527 U.S. 150 (1999), this Court granted certiorari to consider the propriety of the Federal Circuit's "departure from the norm" (*id.* at 155) in refusing to follow the Administrative Procedure Act's ("APA") standard for judicial review of agency actions, on appeals from PTO refusals to grant patent monopolies.[23] The Court held that the Federal Circuit's "departure from the norm" should be corrected, that it was not free to create its own standard of judicial review for the PTO, and that it should follow the same standard other circuits used for reviewing other agencies. In *Zurko*, the Court granted certiorari to correct the Federal Circuit in the absence of a direct conflict. Nonetheless, the Federal Circuit's standard of judicial review was of sufficient national importance to warrant this Court's intervention.

The present case reflects another instance in which the Federal Circuit has exceeded its charter by creating new substantive law superseding prior law in the field. As it did in *Zurko*, this Court should rein in the lower court and bring its patent jurisprudence into congruence with the proper role of a subordinate court in the federal judiciary system.

IV. THE FEDERAL CIRCUIT'S LEGAL STANDARD FOR OBVIOUSNESS DAMAGES THE PATENT SYSTEM

The Federal Circuit's approach to obviousness undermines the federal policies of limiting patent monopoly grants to true inventions. Thomas Jefferson,

---

[23] In *Zurko*, the PTO refused to grant a patent because it found that the supposed invention "was obvious in light of prior art." 527 U.S. at 153. The *en banc* Federal Circuit unanimously reversed the PTO because it considered the agency's fact-findings to be "clearly erroneous." In the Federal Circuit's view, a deferential, APA standard of judicial review of the PTO was unsuitable. This Court reversed.

the "first administrator of our patent system," *Graham*, 383 U.S. at 7 (internal quotation marks omitted), "did not believe in granting patents for small details, obvious improvements, or frivolous devices," insisted "upon a high level of patentability," *id.* at 9, and cautioned against granting monopolies on slight advances not "worth to the public the embarrassment of an exclusive patent," *id.* at 9, 10-11 (internal quotation marks omitted). Accordingly, "'competition should not be repressed by worthless patents,'" *Lear*, 395 U.S. at 663-64 (quoting *Pope Mfg.*, 144 U.S. at 234), or trivial advances.

A. The Federal Circuit's Standard Is Too Lax

1. The Federal Circuit's approach is substantially increasing the number of unworthy patents issued by the PTO and enforced in the courts. That is a development that this Court specifically warned against in *Graham* (383 U.S. at 18-19):

> We have observed a notorious difference between the standards applied by the Patent Office and by the courts. While many reasons can be adduced to explain the discrepancy, one may well be the free rein often exercised by Examiners in their use of the concept of "invention." . . . This is itself a compelling reason for the Commissioner to strictly adhere to the 1952 Act as interpreted here. This would, we believe, not only expedite disposition but bring about a closer concurrence between administrative and judicial precedent.

The Federal Circuit has gone far to eliminate the discrepancy, but it moved in the wrong direction – instead of raising the obviousness standard of the PTO to that of this Court, it has lowered the obviousness standards of the lower federal courts to that condemned by this Court in *Graham*. Indeed, because the Federal Circuit's construction of § 103 applies to grants and denials of patents by the Commissioner of Patents as well as to obviousness determinations in patent infringement cases in district

courts, the Federal Circuit has brought about the diametric opposite of the change in the Commissioner's standards that *Graham* demanded.[24]

2. The Federal Circuit's requirement of documenting a suggestion in the prior art to combine the old elements of the patented device creates a significant practical difficulty because a teaching, suggestion, or motivation to combine the elements of two or more patented devices to arrive at the structure of a third device rarely exists. If such a reference did exist, it could anticipate, and thus invalidate, the patent under § 102.[25] Furthermore, if a prior art reference did suggest combining the elements of a patented device, the author of the prior art reference would likely already have applied for a patent on the combination. Therefore, "through its suggestion test, the CAFC effectively ensured it would rarely find patents for new combinations of prior art obvious." Desmond, *Nothing Seems Obvious*, 26 Loy. L.A. L. Rev. at 475-76.

The stated purpose of the Federal Circuit's requirement that any combination of two references must be supported by a third reference suggesting the combi-

---

[24] *See, e.g., In re Lee*, 277 F.3d at 1342-43 (collecting authorities requiring PTO to follow test of documenting suggestion in prior art before combining references); *In re Huang*, 100 F.3d 135, 139 (Fed. Cir. 1996) ("In deciding whether or not a claimed invention is obvious, we have instructed the [PTO] that it must consider objective evidence of nonobviousness – e.g. commercial success."). Petitioners acknowledge that § 103 should be construed the same way in patent infringement cases and PTO proceedings. Petitioners challenge, however, the low standard of invention that the Federal Circuit applies equally in both contexts.

[25] Section 102 provides that a claimed product will be unpatentable ("anticipated") if all of its elements in combination are identically disclosed in a single reference. *In re Robertson*, 169 F.3d 743, 745 (Fed. Cir. 1999); *In re Schreiber*, 128 F.3d 1473, 1477 (Fed. Cir. 1997).

nation is to "guard against falling into hindsight."[26] Yet, in every one of the obviousness determinations by this Court since the enactment of § 103, the Court did not rely on anything in the prior art to justify combining the elements of the prior art references. The Federal Circuit's remedy is excessive and over-inclusive relative to the problem addressed, and is therefore improper. Careful scrutiny of the primary obviousness factors and detailed analysis of their implications will suffice, as this Court's determinations of obviousness in *Graham*, *Black Rock*, *Johnston*, and *Ag Pro*, and of nonobviousness in *Adams*, clearly show.

3. Besides flouting this Court's precedent, the Federal Circuit's elevation of *Graham*'s secondary considerations above the primary considerations distorts the underlying rational foundations of the patent system, as academics and commentators have pointed out.[27] Because patents without commercial

---

[26] *Ruiz*, 234 F.3d at 664 ("In order to prevent a hindsight-based obviousness analysis, we have clearly established that the relevant inquiry . . . is whether there is a reason, suggestion, or motivation in the prior art or elsewhere that would have led one of ordinary skill in the art to combine the references."); *Ecolochem, Inc. v. Southern California Edison Co.*, 227 F.3d 1361, 1371 (Fed. Cir. 2000) (same), *cert. denied*, 532 U.S. 974 (2001); *In re Dembiczak*, 175 F.3d at 999 (same); *In re Rouffet*, 149 F.3d at 1359 (same).

[27] One widely used textbook observes that the rationale supporting reliance on commercial success rests on a chain of weak inferences that add up to "a fragile thread on which to hang a conclusion of non-obviousness." Martin J. Adelman, Randall R. Rader, John R. Thomas & Harold C. Wegner, *Cases and Materials on Patent Law* 455 (1998) ("Adelman, *Patent Law*"). *See also* Edmund Kitch, *Graham v. John Deere Co.: New Standards for Patents*, [1966] Sup. Ct. Rev. 293 (arguing that basing unobviousness on evidence of commercial success depends on a series of faulty inferences); Robert P. Merges, *Commercial Success and Patent Standards: Economic Perspectives on Innovation*, 76 Cal. L. Rev. 803, 838, 842 (1988) ("Commercial success is a poor indicator of patentability because it is indirect; it depends for its effectiveness on a long chain of inferences, and the links in the chain are often subject to doubt.

value are not litigated, the Federal Circuit's rule creates an unjustified presumption that "all patents that are litigated should be held valid." Adelman, *Patent Law* 455. Furthermore, such patents are least in need of monopoly incentives; yet, they impose the heaviest monopoly tax on the public, because they enjoy the heaviest sales.[28] Elevating commercial success over the *Graham* primary considerations thus drags down the standard of patentability, contrary to the consistent policy teachings of this Court – from *Atlantic Works* through *Graham* and *Bonito Boats* – that the public should pay patent monopoly taxes only for a true invention, and that it is entitled to free and open competition in the manufacture and sale of products that lack the technological and inventive merit to qualify for protection under the patent statute. *See Bonito Boats*, 489 U.S. at 151 ("[T]he federal patent laws must determine not only what is protected, but also what is free for all to use.").

Because the Federal Circuit applies the same low standard of invention in its review of the Commissioner's rejection of patent applications as that court does in patent infringement cases, the adverse impact on the public is widened and made even more harmful.[29]

. . . [The second objection to the commercial success doctrine is that it] assumes an overly simplistic model of innovation.").

[28] *See* Adelman, *Patent Law* 455-56 ("Commercially successful patents are the ones that truly impose a monopoly tax on the market, and therefore courts should be even more cautious in holding them valid. Furthermore, it is in the area of innovations that quickly meet consumer acceptance that the innovator has the best chance of recovering his special costs without a patent monopoly.").

[29] Because the Federal Circuit's construction of § 103 also has a significant impact on the administration of the PTO, the Court may consider it appropriate to call for the views of the Solicitor General.

B. The Federal Circuit Has Far Exceeded Its Assigned Role in Patent Cases

The Federal Circuit was created in 1982 to respond to a number of then-prevailing views of members of this Court, the informed bar, and Congress that a greater degree of uniformity in patent law decisions would be desirable. A significant concern was expressed, however, that a new, specialized court would insulate patent law from "the self-correcting forces" of the general law and encourage development of a separate body of law that could be "at odds with the policies pursued by the general law." Simon Rifkind, *A Specialized Court for Patent Litigation? The Danger of a Specialized Judiciary*, 37 ABA J. 425, 425 (1951). *See also* Daniel J. Meador, *Origin of the Federal Circuit: A Personal Account*, 41 Am. U. L. Rev. 581, 587-88 (1992) (discussing "widespread sentiment [that] was evident among the bench and bar" over risks of specialized courts, coinciding with the concerns that Judge Rifkind had expressed).

That concern has largely been borne out, as the achievement of uniformity has come at the cost of fidelity to this Court's precedents and congressional intent. In four cases over the past ten years, this Court has seen fit to reverse or limit the Federal Circuit's overly permissive holdings in favor of patents.[30]

---

[30] *See Florida Prepaid Postsecondary Educ. Expense Bd. v. College Sav. Bank*, 527 U.S. 627 (1999) (reversing Federal Circuit's ruling that patent statute abrogated state sovereign immunity); *Dickinson v. Zurko*, 527 U.S. 150 (1999) (reversing Federal Circuit's failure to apply APA standard of review to PTO fact-findings); *Warner-Jenkinson Co. v. Hilton Davis Chem. Co.*, 520 U.S. 17 (1997) (reversing Federal Circuit's failure to consider all of the requirements under doctrine of equivalents); *Cardinal Chem. Co. v. Morton Int'l, Inc.*, 508 U.S. 83 (1993) (reversing Federal Circuit's practice of vacating invalidity decisions as moot). *See also Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, No. 00-1543, 2002 WL 1050479 (U.S. May 28, 2002) (reversing Federal Circuit for failing to follow Supreme Court's *Warner-Jenkinson* decision).

Although the standard of obviousness arises in virtually every litigated patent case, this Court has never reviewed a Federal Circuit decision applying the obviousness standard of § 103. Because that court's decisions depart markedly from this Court's precedents and the body of decisions of the regional circuits antedating the establishment of the Federal Circuit, this Court should now redress the Federal Circuit's aberrational construction of this fundamental provision of patent law.

CONCLUSION

The petition for a writ of certiorari should be granted.

Respectfully submitted,

PETER D. EHRENHAFT
Counsel of Record
ALAN I. HOROWITZ
MILLER & CHEVALIER, CHARTERED
655 Fifteenth Street, N.W.
Suite 900
Washington, D.C. 20005
(202) 626-5905

RICHARD H. STERN
DAVID C. FREDERICK
KELLOGG, HUBER, HANSEN, TODD & EVANS, P.L.L.C.
1615 M Street, N.W.
Suite 400
Washington, D.C. 20036
(202) 326-7900

June 5, 2002